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Mississippi Interpregnancy Care Project

[Metro Infant Mortality Elimination (MIME)/Delta Infant Mortality Elimination (DIME)]

Location: Mississippi
Date Submitted: 08/2011
Category: **Emerging Practice**

TITLE V/MCH BLOCK GRANT MEASURES ADDRESSED
#3: Percent of very low birth weight (VLBW) infants born in a hospital with a Level III+ Neonatal Intensive Care Unit (NICU).

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BACKGROUND

Mississippi has experienced little change in infant mortality over the past decade indicating the need to identify new strategies to improve outcomes for Mississippi families. A host of negative determinants of health including critical health professional shortages, federally designated medically underserved areas, obesity, chronic illness, poverty, unemployment, high school drop-outs, teenage births, and lack of public transportation contribute to the problem. Two pilot programs have been implemented to increase women's access to primary care. Modeling after a program among high risk Georgia mothers, the projects were devised to work with indigent African American women at risk for very low birth weight delivery, which accounts for more than half of Mississippi infant deaths. Outreach and educational services are provided at individual, community, and professional education levels. Innovative and collaborative relationships among MCH partners have been developed and new partners are being recruited as opportunities and needs are identified. Quantitative and qualitative data are being recorded. Multiple national, state, and local partners are working together to meet the needs of the target population. Other MCH providers and program developers seeking new and innovative strategies for improving birth outcomes would benefit from learning more about these exciting projects.

PROGRAM OBJECTIVES

The three primary project objectives for the MIME/DIME Program are as follows:

1. To provide comprehensive, integrated primary care services to women who deliver a very low birth weight infant (stillborn or live born) at UMMC, of whom 75% will carry out a mutually agreed upon plan for interpregnancy care and 90% who desire a subsequent pregnancy will achieve an interpregnancy interval of at least 9 months.
2. To achieve a shift in the birth weight distribution for subsequent births to enrolled women compared to the subsequent birth weight distribution they would have had if they had not participated in the program (based on comparison with data from a control group comprised of women who delivered VLBW infants at UMMC who are not receiving care through the interpregnancy primary care (IPC) program).
3. To disseminate information regarding the contribution of very low birth weight infants to overall infant mortality and morbidity rates and racial disparities in the state of Mississippi, the prevalence of medical and social problems contributing to VLBW rates in the program population, the content and logistics of providing IPC, as well as the costs and measurable outcomes of effectiveness of care.

TARGET POPULATION SERVED

The communities served include an expanded area of Metropolitan Jackson (Hinds, Madison, and Copiah counties) and an 18-county catchment area of the Mississippi Delta (Desoto, Tunica, Tate, Panola, Quitman, Coahoma, Tallahatchie, Bolivar, Sunflower, Carroll, Leflore, Washington, Humphreys, Holmes, Yazoo, Sharkey, Issaquena, and Warren) that are predominantly African-American with high rates of poverty. The programs began enrolling participants in February 2009. Participants will be followed by the program for up to two years. The last group of enrollees is expected to "roll off" the program in early 2012.

PROGRAM ACTIVITIES

These projects are modeled after a pilot program among a small group of high risk Georgia women conducted at Grady Memorial Hospital in Atlanta, GA. The Atlanta project was performed on a very small scale with less than 30 total

participants. These programs replicate the Grady project as closely as possible utilizing their instruments and tools, but are doing so on a much grander scale (>100 participants) and in two varying geographical regions – one urban and one rural. The urban component of the program, known as MIME, is more closely replicating the original project because resources are available in the urban area that makes close replication more possible. However, the DIME component, in the Mississippi Delta, produces challenges in meeting the needs of the participants and delivering the desired program package. The Mississippi Delta region is one of the poorest areas of the United States and resources including health care and enabling services are very limited and sparsely situated. For this, adjustments are being made to the program package and case management strategies to get the woman access to care and needed support services. An example would be the absence of public transportation. The nearest physician's office may be dozens of miles away and there is no public rural transit system. Therefore, alternate options must be considered to assist the mother in reaching her needed appointments.

PROGRAM OUTCOMES/EVALUATION DATA

Quantitative and qualitative data are being recorded for future analysis. On-going surveillance data is being collected on acceptability and delivery of the interpregnancy primary care (IPC) service package indicators. Two sets of indicators (acceptability and delivery of the IPC service package) will be followed on an on-going basis while two other sets of indicators (health and reproductive outcomes, costs of service package) will be evaluated at the project's end. At the project's conclusion a cost-benefit analysis will be performed comparing cost savings with costs of the program. Data is collected without identifiers via medical record review and used to assemble a historical control group. Specific examples of variables collected include maternal age at delivery, address, race, insurance status, hospital of delivery, type of delivery, singleton vs. multiple pregnancy, date of delivery, birth weight and estimated gestational age of delivered infant. To be eligible for the historical control group, women must meet the following eligibility criteria: (1) Have a medical record file at UMMC; (2) Have delivered a VLBW (500-1499gm) infant (stillborn or live born) at UMMC hospital within the last 5 years; (3) Closely match an intervention group subject with respect to residence, age, race, number of previous LBW or preterm deliveries, and insurance status. Historical control group subjects will be identified by searching for all VLBW deliveries to any woman whose data is housed within the UMMC Health Information System.

Since February 2009, 110 women have enrolled in the projects. Early data suggest improved outcomes and achievement of adequate child spacing. Full evaluation data will be available after the final women complete program in 2012.

PROGRAM COST

The anticipated cost of the service delivery package is about $2,000 per year per participant. A cost analysis study will be conducted at the end of the project to compare program savings with cost of service delivery.

ASSETS & CHALLENGES

Assets

In 2006, the Mississippi State Department of Health acquired a new State Health Officer who placed infant mortality as the number one priority for the Agency. That designation led to a search for new and innovative projects to improve infant health and birth outcomes.

Challenges

Initially, there was a delay in starting the program, and the greatest challenge was securing funding for the project. In Mississippi, funding usually consumed filling gaps in MCH services rather than funding new projects that are more proactive in nature. Also, Institutional Review Board approval caused delays in implementation due to the extensive documentation associated with the project.

Overcoming Challenges

The program was fortunate enough to receive funding from the Delta Health Alliance who was looking for innovative strategies in reducing infant mortality in the Mississippi Delta. The funding needed to implement the project for the Jackson area came from other MCH funding. The IRB issues were not a true obstacle, but more a delay in implementation that eventually resolved itself.

FUTURE STEPS

Data from the pilot projects will be used for development of health policy to establish a Medicaid waiver program to provide up to two years of primary care and case management services for women at risk for high-risk deliveries. The Mississippi State Department of Health (MSDH) is implementing expanded access to basic components of the program. Our vision for these programs is to empower more women with the knowledge and services needed to be proactive in reproductive health decisions and preconception health. If proven effective, MSDH plans to expand the MIME and DIME projects to other areas of the state upon availability of adequate funding.

COLLABORATIONS

MSDH, as the official Title V agency for the state of Mississippi, provides oversight and primary leadership for the project. Innovative and collaborative relationships among MCH partners have been developed and new partners are being recruited as opportunities and needs are identified. Multiple national, state, and local partners are working together to meet the needs of the target population. The

primary partner is the University of Mississippi Medical Center, Mississippi's only tertiary care facility. It is the single recruitment site as well as the origin of the MIME component of the project. The federally qualified health centers are providing medical homes for women who do not have one. The Division of Medicaid provides historical data integral to the study required for health policy development and justification of application for a Medicaid waiver as a future plan of sustainability and expansion to statewide scope for the project. Additionally the World Health Organization Collaborating Center for Reproductive Health provides technical assistance for program implementation and project evaluation. Some private partners provide other services, such as pharmacy support or transportation.

PEER REVIEW & REPLICATION

Preliminary findings were presented at the 3rd National Summit on Preconception Health in June 2011. Staff have also provided information on lessons learned to neighboring states that expressed interest in replicating the program.

RESOURCES PROVIDED

Products and resources will be available at the completion of the project.

Key words: Infant Mortality, Interconception Care, Birth Outcomes, Access to Care, Primary/Preventive Care, Prenatal Care

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